

1-2

Skills Practice

Properties of Real Numbers

Name the sets of numbers to which each number belongs.

1. 34

2. -525

3. 0.875

4. $\frac{12}{3}$

5. $-\sqrt{9}$

6. $\sqrt{30}$

Name the property illustrated by each equation.

7. $3 \cdot x = x \cdot 3$

8. $3a + 0 = 3a$

9. $2(r + w) = 2r + 2w$

10. $2r + (3r + 4r) = (2r + 3r) + 4r$

11. $5y\left(\frac{1}{5y}\right) = 1$

12. $15x(1) = 15x$

13. $0.6[25(0.5)] = [0.6(25)]0.5$

14. $(10b + 12b) + 7b = (12b + 10b) + 7b$

Name the additive inverse and multiplicative inverse for each number.

15. 15

16. 1.25

17. $-\frac{4}{5}$

18. $3\frac{3}{4}$

Name the property illustrated by each statement.

11. If $a = 0.5b$, and $0.5b = 10$, then $a = 10$.

12. If $d + 1 = f$, then $d = f - 1$.

13. If $-7x = 14$, then $14 = -7x$.

14. If $(8 + 7)r = 30$, then $15r = 30$.

Name the property illustrated by each statement.

9. If $t - 13 = 52$, then $52 = t - 13$.

10. If $8(2q + 1) = 4$, then $2(2q + 1) = 1$.

11. If $h + 12 = 22$, then $h = 10$.

12. If $4m = -15$, then $-12m = 45$.

Define a variable, write an equation, and solve the problem.

25. **GEOMETRY** The length of a rectangle is twice the width. Find the width if the perimeter is 60 centimeters.

Solve each equation or formula for the specified variable.

16. $a = 3b - c$, for b

18. $h = 12g - 1$, for g

20. $2xy = x + 7$, for x

22. $3(2j - k) = 108$, for j

24. $\frac{m}{n} + 5m = 20$, for m

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Solve each equation. Check your solutions.

1. $|x + 15| = 37$

3. $|x - 5| = 45$

5. $|5b + 9| + 16 = 2$

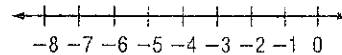
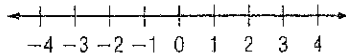
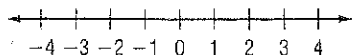
7. $5n + 24 = |8 - 3n|$

Solve each inequality. Describe the solution set using set-builder or interval notation. Then graph the solution set on a number line.

1. $7(7a - 9) \leq 84$

2. $3(9z + 4) > 35z - 4$

3. $5(12 - 3n) < 165$



4. $18 - 4k < 2(k + 21)$

5. $4(b - 7) + 6 < 22$

6. $2 + 3(m + 5) \geq 4(m + 3)$

